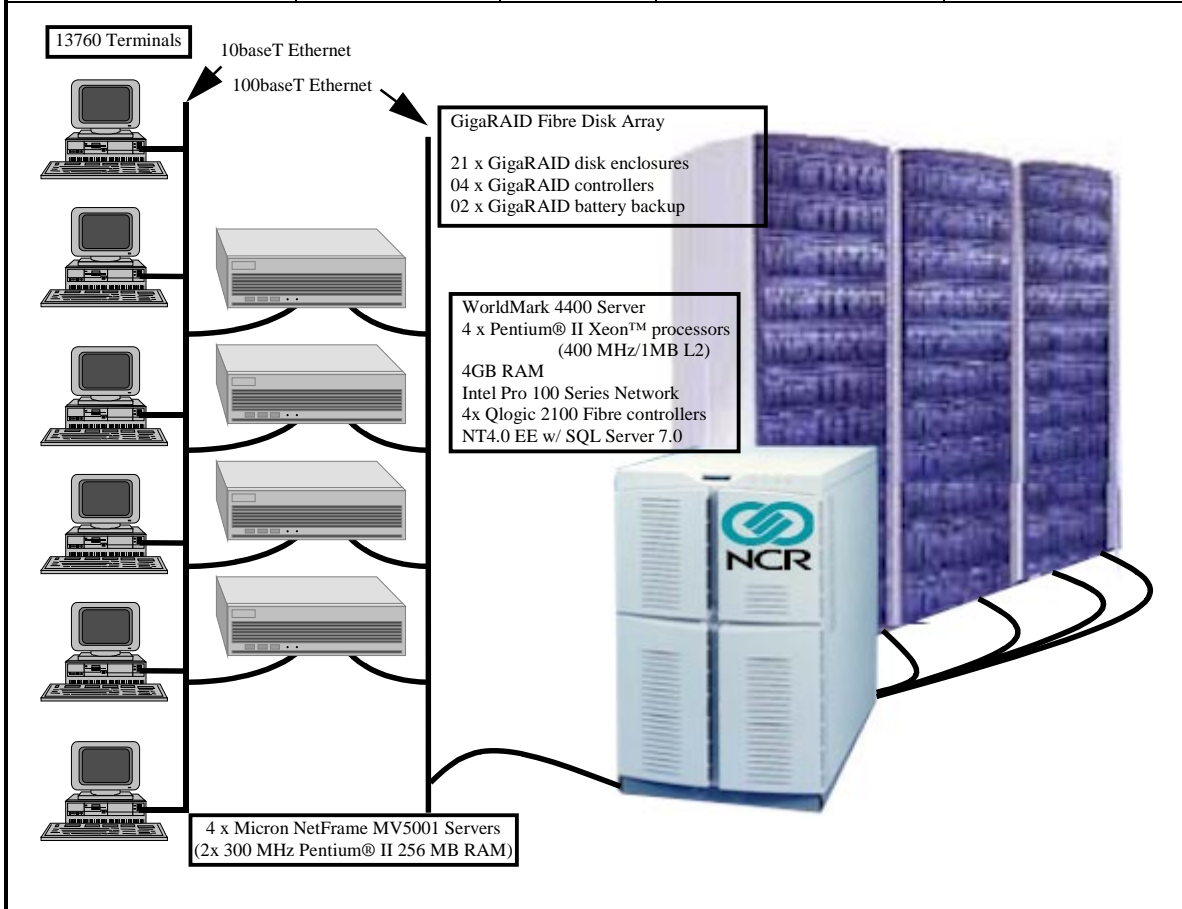


NCR Corporation	NCR WorldMark 4400		TPC-C Rev 3.3.3 Report Date June 29, 1998	
Total System Cost	TPC-C Throughput	Price/Performance		Availability Date
\$839,284	17009.67 tpmC	\$49.34 /tpmC		December 29, 1998
Processors	Database Manager	Operating System	Other Software	Number of Users
4x 400-MHz (1MB L2) Pentium® II Xeon™ processors	Microsoft SQL Server Enterprise Edition 7.0	Microsoft Windows NT 4.0 EE	BEA Tuxedo Microsoft Internet Information Server Microsoft Visual C++	13760



System Component	Server		Clients	
Processors	4	Pentium® II Xeon™ processor 400MHz	2	Pentium® II 300MHz
Cache Memory		1MB 4096MB		512KB 1256MB
Disk Controllers	4	Qlogic 2100 Fibre controller	1	Embedded Symbios 810
Disk Drives	1	Embedded Adaptec 7895	1	4 GB
Total Storage	202	9 GB	1	4 GB
Other	1	4 GB	1	4 GB
	203	1822 GB	1	4 GB
	2	CD-ROM, 8mm DAT	1	CD-ROM

Description	Product ID	Third Party	Unit List	Quantity	Extended List	Extended 5 Year Maint	
Server Hardware							
WorldMark 4400 Server 4x400MHz/1MB L2 Processors CD-ROM, 32X HD Disk - 4GB 7200 F/W Hot Plug	4400-4000-8090	Brand	7,8	47,850	1	39,237	6,640
7/14GB 8mm DAT Drive	F430			2835	1	2,325	
Memory DIMM 1GB EDO (8x128) 50ns	F119			9,400	4	30,832	
PCI Ethernet Adapter 100Mb, drivers/docs	F147/F148			225	1	185	64
Monitor, 14", Color	3498-2244-8090			320	1	262	128
Qlogic Fibre Controller	QLA2100	Qlogic	3	750	4	2,460	
Spare Qlogic Fibre Controller (no doc,cables)	QLA2100-BK	Qlogic	3	699	2	1,146	
Disk Solution							
GigaRAID Rackmount Disk System	GFC-5001-R		2	2,474	18	44,532	
GigaRAID Add-on Link Module	GFC-5000-LM		2	708	1	708	
GigaRAID 8.8GB, 7200RPM Disk Module	GFC-7880-S		2	1,388	202	280,376	
GigaRAID Model 5500 Disk Array (dual)	GFC-5501-R		2	35,663	1	35,663	
GigaRAID Model 5500 Disk Array (single)	GFC-5401-R		2	17,889	2	35,778	
GigaRAID Dual Standby Power Supply	GFC-SBPSD-R		1	2,200	1	2,200	
GigaRAID 256MB Read Cache Memory	GFC-CACHE-R256		2	2,026	4	8,104	
GigaRAID 128MB Mirrored Write Cache Mem.	GFC-MCACHE-W128		2	2,026	1	2,026	
Fibre Cable - 10 meter	GFC-CBL-C9910		2	115	2	230	
GigaRAID Cabinet Mounting Kit	GFC-MKIT-5		2	57	2	114	
GigaRAID Rackmount Cabinet	GFC-DCC-75-5		2	3,415	2	6,830	
1yr. 5x9 On-Site Maintenance - GigaRAID	OSM/FC10-5		2	1,620	105		170,100
Server Software							
MS NT Server 4.0 EE, 25 CAL		Microsoft	1	3,999	1	3,999	10,475
MS SQL Server 7.0, EE, Unlimited Users		Microsoft	1	28,999	1	28,999	
					Subtotal	526,006	187,407
Client Hardware							
Netframe MV5001 Server, (2xPII)	CFG4169759	Micron	5	6,396	4	25,584	
Intel Ethernet Express Pro/100	NWO0001071-00	Micron	5	99	12	1,188	
					Subtotal	25,584	0
Client Software							
MS Windows NT Server 4.0, 5 CAL		Microsoft	1	809	4	3,236	0
Visual C++ Professional 5.0		Microsoft	1	499	1	499	0
Tuxedo 6.4 Core Functionality Services for NT		BEA	6	3,000	4	12,000	9,000
					Subtotal	15,735	9,000
User Connectivity							
Cisco Model 1548 Switch	4261-5199-6300	Cisco	NCR	1,295	1	1,062	1,100
COMPEX 8 Port Hubs 10BaseT		COMPEX	4	39	1736	67,704	0
Spare COMPEX 8 Port Hubs 10BaseT		COMPEX	4	39	174	6,786	0
					Subtotal	75,552	0
					Total	642,877	\$196,407
NOTES: 1: Microsoft - Client/server software maint. shown bundled under Server Software. 2: GigaRAID maint. shown bundled under Disk Solution 3: EBV Electronics 4: Silicon Solutions 5: Micron, incl. support upgrade 6: BEA 6: Server Maint. bundled under Server 7: NCR pricing incl. standard 18% discount Hardware is available August 31, 1998; Software available December 29, 1998.				Five-Year Cost Of Ownership: 839,284 tpmC Rating: 17,009.67 \$/tpmC: \$49.34			
Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these items, please inform the TPC at pricing@tpc.org.							

Summary of Numerical Quantities

MQTh , computed Maximum Qualified Throughput		17009.67 tpmC	
% throughput difference, reported & reproducibility runs		0.23%	
Response Times (90th percentile Average Maximum) in seconds			
- Neworder	0.52	0.38	5.03
- Payment	0.29	0.21	7.73
- Order Status	0.39	0.29	1.85
- Delivery (interactive portion)	0.29	0.29	20.01
- Delivery (deferred portion)	1.53	0.87	22.59
- Stock-Level	3.69	2.98	6.39
- Menu	0.30	0.20	1.03
Response time delay added for menu delay		0.1	
Response time delay added for response time delay		0.1	
Transaction Mix , in percent of total transactions			
- New-Order	44.73 %		
- Payment	43.10 %		
- Order-Status	4.04 %		
- Delivery	4.06 %		
- Stock-Level	4.07 %		
Keying/Think Times (in seconds),		Min	Average
- New-Order	18.02	0	18.02 12.07 18.06 121.00
- Payment	3.02	0	3.03 12.21 3.07 122.01
- Order-Status	2.02	0	2.03 10.11 2.06 102.01
- Delivery	2.02	0	2.03 5.22 2.05 51.98
- Stock-Level	2.02	0	2.03 5.11 2.05 50.81
Test Duration			
- Ramp-up time	44 minutes		
- Measurement interval	30 minutes		
- Number of checkpoints	1		
- Checkpoint interval	30 minutes		
- Number of transactions (all types)	1,140,769		
Completed in measurement interval	1,140,769		